SONY

3-755-104-22 (1)

Audio Cassette Duplicator

Model:

CCP-2300
CCP-2400

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

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Owner's Record

The model and serial numbers are located at the rear. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____Serial No._____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

WARNING

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

WARNING
THIS APPARATUS MUST BE EARTHED

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow: Earth
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of the apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow. The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

NOTICE ON OPERATING VOLTAGE AND FREQUENCY

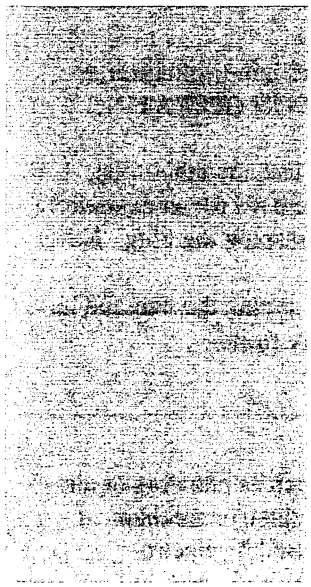
Before operating the unit, refer to the nameplate located on the rear panel to verity that your unit operates on the same voltage and frequency as your local power line.

The CCP-2300 and 2400 come in two types.

USA and Canadian models:
Operates on 120 V AC, 60 Hz.

European model:
Operates on 230 V AC, 50/60 Hz.

Table of Contents



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Precautions

On safety

- Before operating, check to see that your unit is set to the same voltage and frequency as your local power line. Refer to "NOTICE ON OPERATING VOLTAGE AND FREQUENCY".
- Operate only with the supplied AC power cord; do not use any other type.
- Unplug the unit from the wall outlet when it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull it by the cord.
- Should any liquid or solid objects fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

On installation

- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, or mechanical vibration, shock or excessive noise levels such as is caused by electro-photocopiers or similar devices.
- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

On operation

- While duplicating, take care not to turn ON or OFF the POWER switch of the connected equipment or change the position of the SIDE SELECT switch, as a click sound will be recorded.
- If the cassette duplicators are installed in an area of ambient temperature above 25°C (77°F), it is recommended that the system **be rested for more than one hour for every 6 or 7 hours of use.**
- When the unit is not used, turn the power off to conserve energy and to extend the useful life of the unit.

If you have any question or problem concerning your unit that is not covered in this booklet, please consult your nearest Sony dealer.

CAUTION
Discs, recorded tapes, broadcasts and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

Features

CCP-2300 Audio Cassette Duplicator

- High speed cassette duplication at 16 times normal speed.
- Side selector to select one-side duplication or both-side duplication.
- Auto-copy function to activate a series of tape operation automatically at the press of a button.
- Short tape indicator to show that duplication may be uncompleted due to a short copy tape and that a check is required.
- Control output terminal for connecting an additional audio cassette duplicator with copy section only.
- Playback volume controls with level meters for each channel of the original tape.
- Two-reel motor direct drive system per each position.
- End beep when duplication is finished.
- The static suppression brush for preventing electrostatic noise.
- Up to 10 CCP-2400s can be connected to CCP-2300.

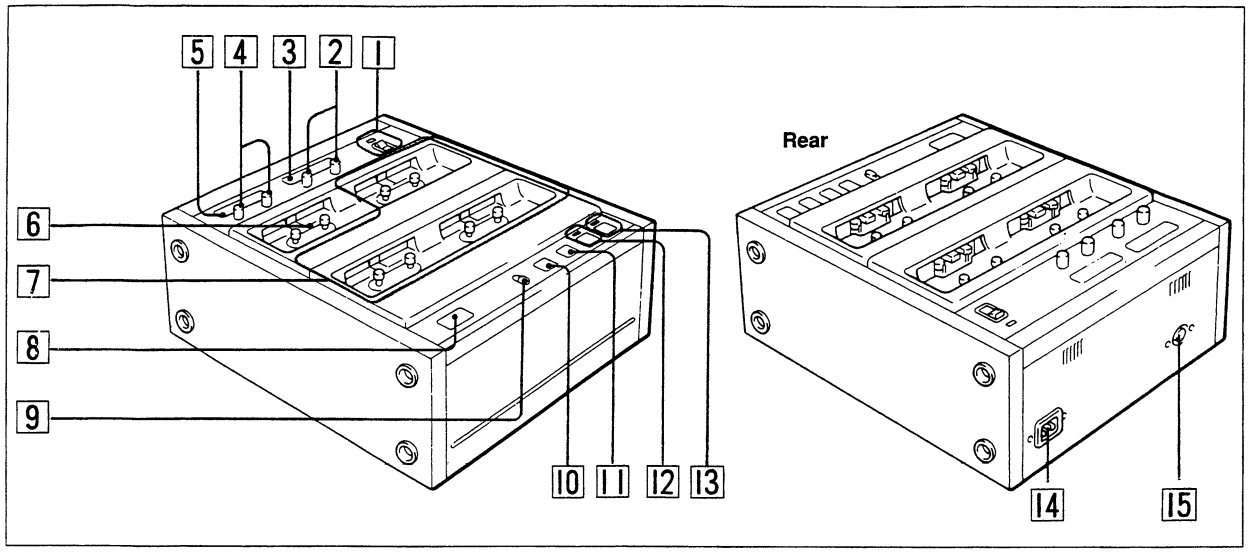
CCP-2400 Audio Cassette Duplicator

When connected to CCP-2300:

- High speed duplication onto 4 copy cassettes at 16 times normal speed.
- Tape operation fully controlled by the connected CCP-2300.

Location and Function of Controls

CCP-2300



1 Power switch and indicator
Turn the switch ON and the indicator lights up. The SHORT TAPE indicators also light up. After four seconds of warming up, the SHORT TAPE indicators will go off and the unit will be ready to operate.

2 Side B playback level controls
The knobs L and R control the left and right output levels of the playback sound respectively.

3 Side B level meters
The meters L and R indicate the left and right output levels of the playback sound respectively.

4 Side A playback level controls
The knobs L and R control the left and right output levels of the playback sound respectively.

5 Side A level meters
The meters L and R indicate the left and right output levels of the playback sound respectively.

6 ORIGINAL cassette compartment

7 COPY cassette compartments 1, 2 and 3

8 SHORT TAPE indicators
Lights when the corresponding copy tape reaches the end before the original tape is completely duplicated. (Refer to "SHORT TAPE Indicator" on page 13.)
Also lights when there is no tape in the corresponding cassette compartment. The indicators go off when any button but STOP is pressed.

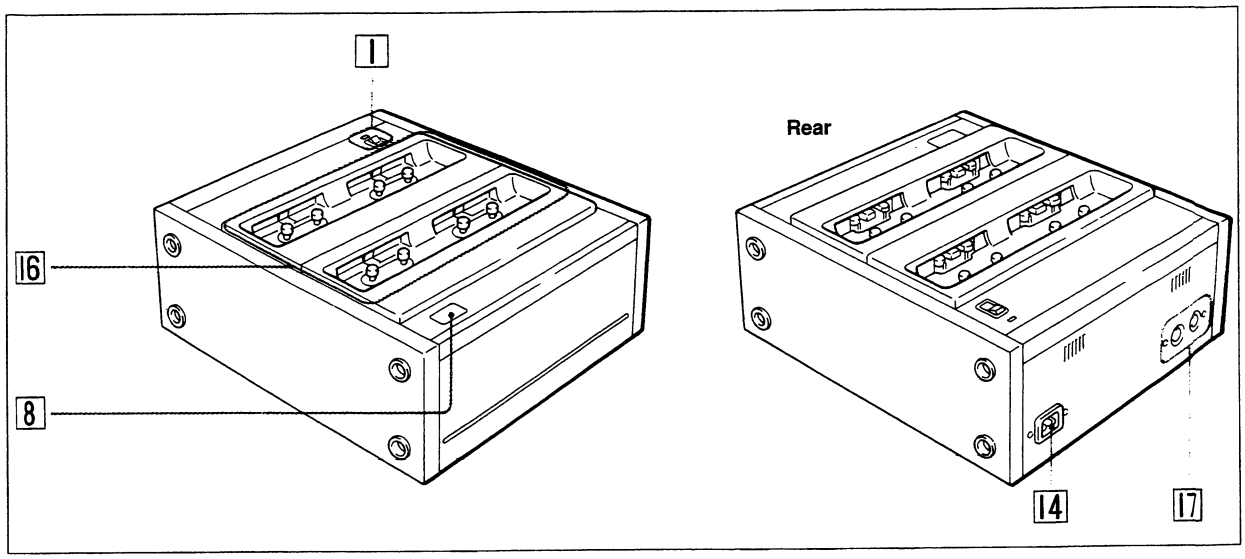
9 SIDE SELECT switch
Selects one side or both sides of the cassette per duplication run.
A : for one side duplication.
A + B : for both sides duplication.

10 REWIND button
Press to rewind the tape(s). Each tape stops automatically at the beginning. The tapes in all connected CCP-2400 duplicators will also be rewound.

11 STOP button
Press to stop the tape(s). The tapes in all connected CCP-2400 duplicators will also stop.

CCP-2400

1, 8 and 14 controls have the same function as the ones on the CCP-2300.



12 COPY button and indicator

Press to duplicate the tapes. The indicator lights and playback of the original tape and recording on the copy tape start immediately. Recording also starts in all connected CCP-2400 duplicators. When duplication is finished, all the tapes stop. The indicator goes off and the end beep sounds.

13 AUTO COPY button and indicator

Press to rewind and then duplicate the tapes. The indicator lights and all the tapes are rewound to the beginning. When all the tapes have been rewound, the AUTO COPY and COPY indicators light and then playback of the original tape and recording on the copy tapes start. Recording also starts in the connected CCP-2400 duplicators. When duplication is finished and all the tapes come to the end, the COPY indicator goes off. With the AUTO COPY indicator still lit, all the tapes, except the tape with its SHORT TAPE indicator lit, start to rewind. When all the tapes are rewound to the beginning, the AUTO COPY indicator will go off and the end beep will sound.

14 AC IN socket

Connect the supplied AC power cord.

15 LINE/CONTROL OUTPUT connector (13-pin DIN)

Supplies the track signal of the original tape and the driving signal to additional duplicators. Connect to the LINE/CONTROL INPUT connector of CCP-2400.

16 COPY cassette compartments 1, 2, 3 and 4

17 LINE/CONTROL connectors (13-pin DIN)

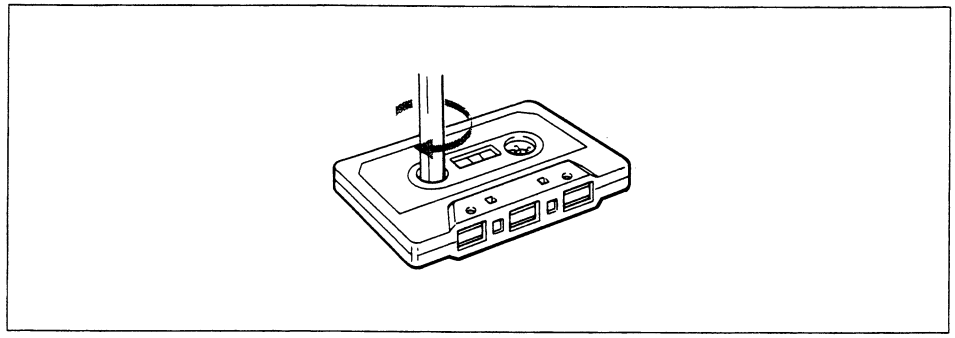
INPUT: Accepts the track signal of the original tape and the driving signal from CCP-2300. Connect to the LINE/CONTROL OUTPUT connector of CCP-2300.

OUTPUT: Supplies the track signal of the original tape and the driving signal to an additional duplicator. Connect to the LINE/CONTROL INPUT connector of the additional CCP-2400.

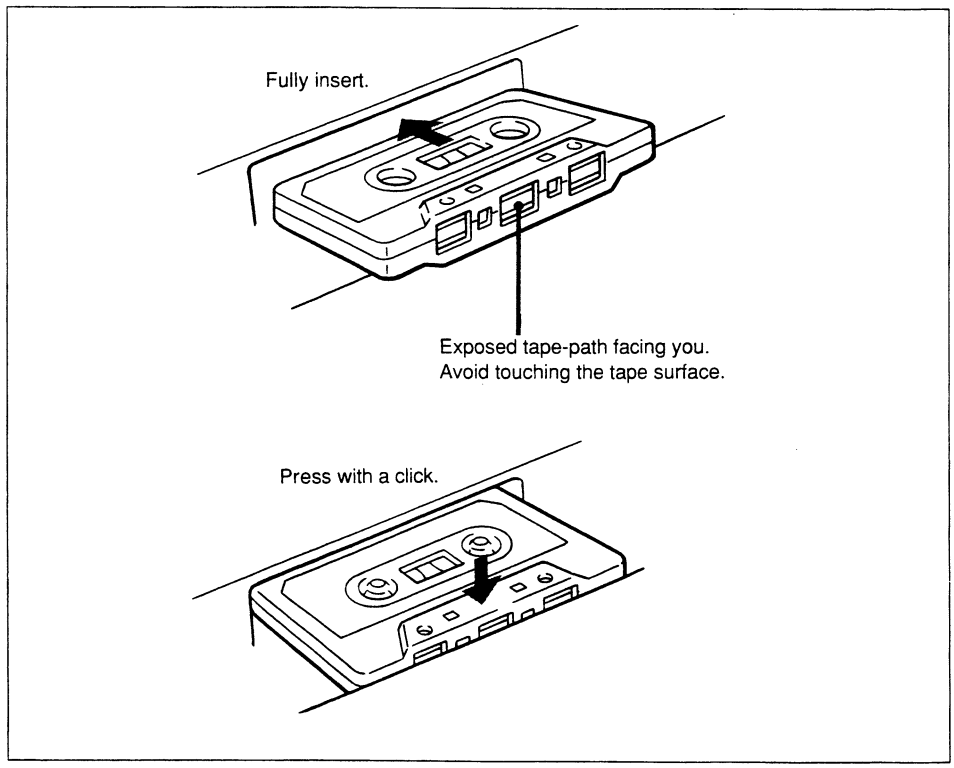
Preparation

Cassette Insertion

1 Before inserting a cassette, take up any slack in the tape.

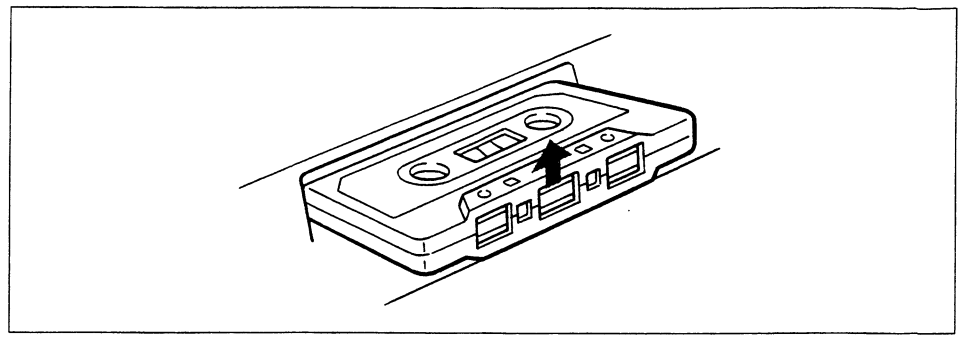


2 Check the cassette sides.
For both-side duplication: To duplicate the content of the original cassette side A onto the side A of the copy cassette, install the cassettes with the same side up.
For one-side duplication: Insert the original and copy cassettes with the required side up.



To remove

First lift off the tape-path side and then remove the cassette.

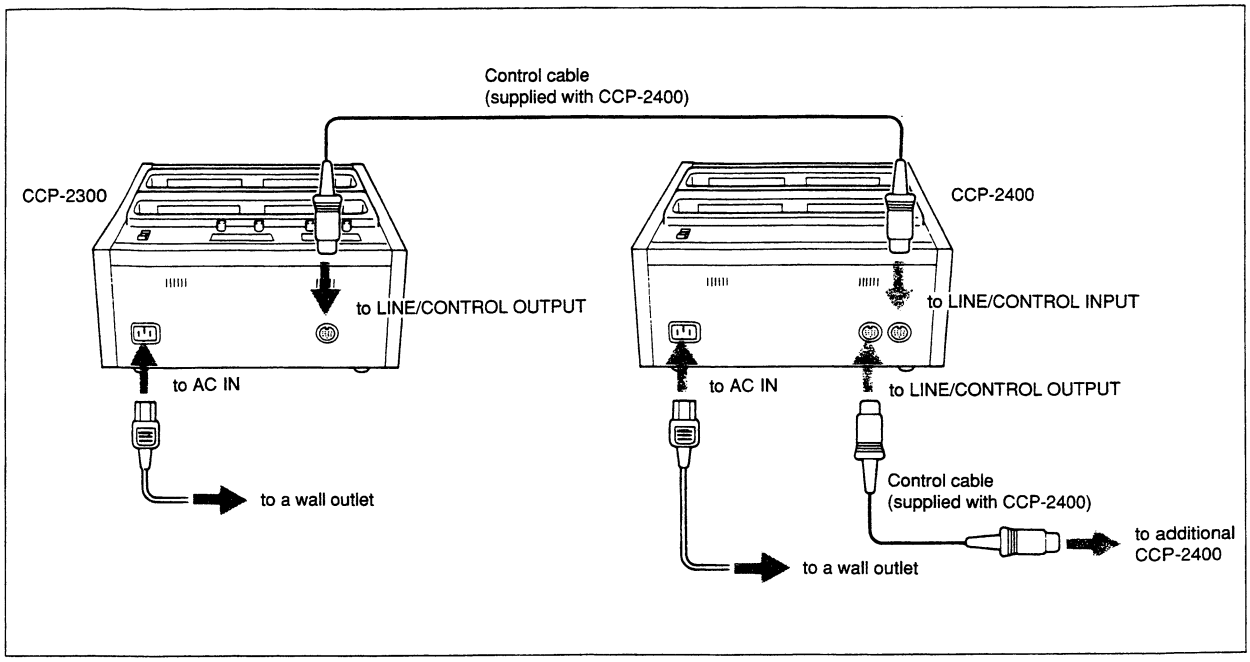


Notes on cassettes

- Use normal TYPE I cassettes.
- It is advisable to use cassettes of the same brand, as, even if the cassettes have the same rated duration, they may differ a little in length, depending on the manufacturers. This prevents incomplete duplication.
- Use of a 120-minute cassette tape is not recommended. Frequent switching of the tape operation mode can result in the tape becoming tangled because the tape is very thin and can easily be stretched.
- Remember that duplication can be made, even though the copy cassette has had the safety tabs for preventing accidental erasure removed.
- The recording of an original cassette will deteriorate by several decibels at 10 kHz after it has been duplicated 100 times. If it should be duplicated more than 100 times, prepare extra original cassettes.

Connection

Connect the LINE/CONTROL OUTPUT connector and the LINE/CONTROL INPUT connector.

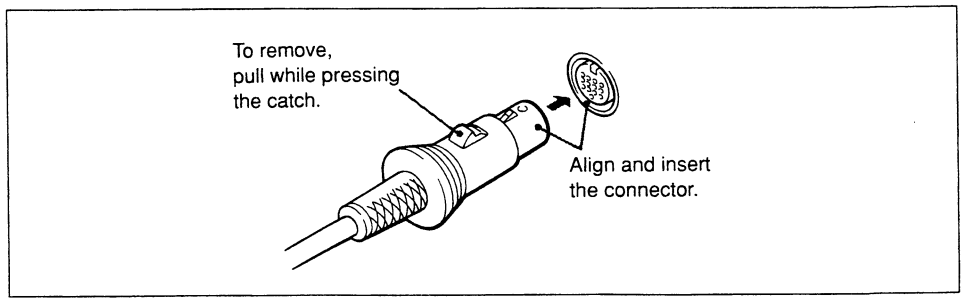


Notes

- Before making connections, be sure to turn off the power.
- You can connect up to 10 CCP-2400s in series.

Using control cable

Connect the LINE/CONTROL OUTPUT connector and the LINE/CONTROL INPUT connector as illustrated below.



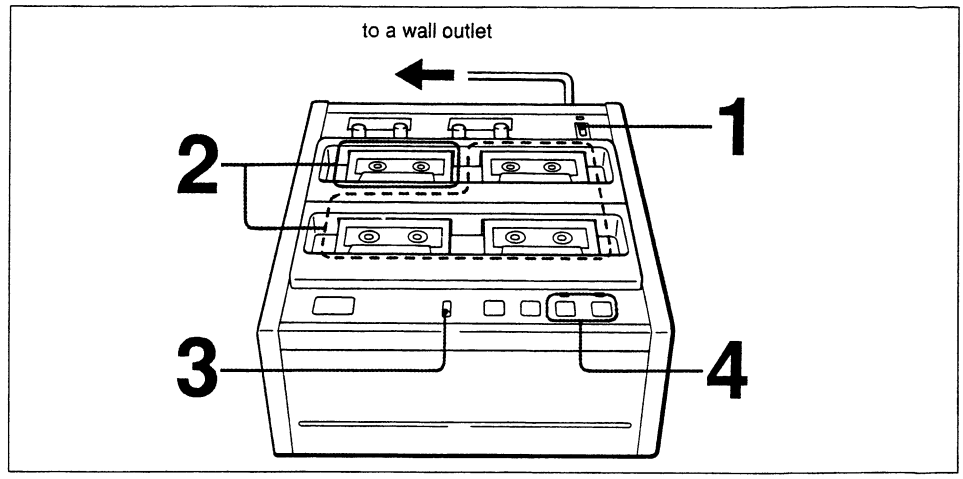
How to insert or remove the connector

Duplication

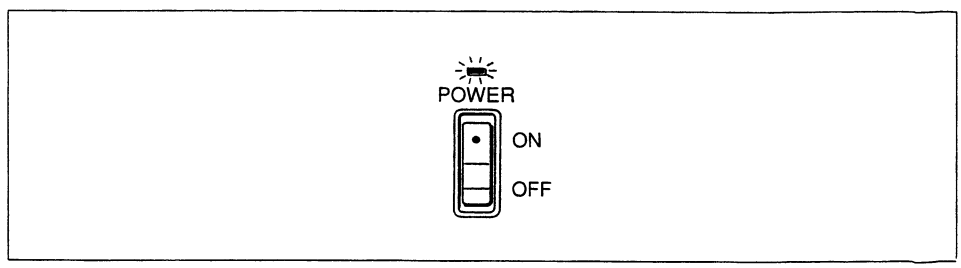
Before starting the unit

Five-minute warming up is recommended before starting the unit.
During warming up, you can clean the heads (see page 14).

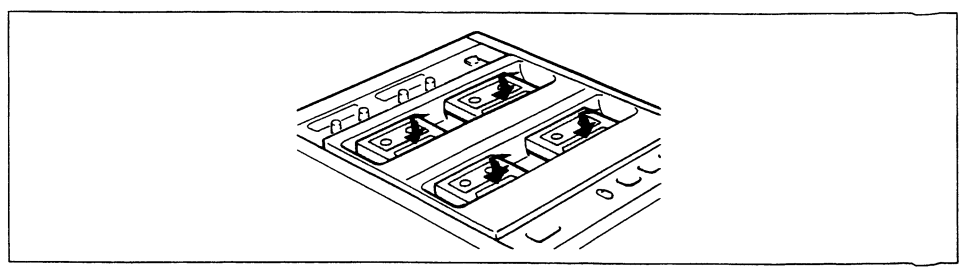
To duplicate the tapes



1 Set the Power switch to ON.
The indicator lights up.
Allow four seconds for warming up.

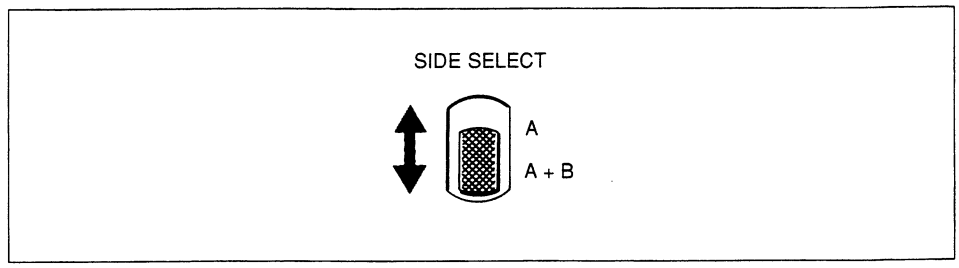


2 Insert the original cassette and the copy cassette(s).

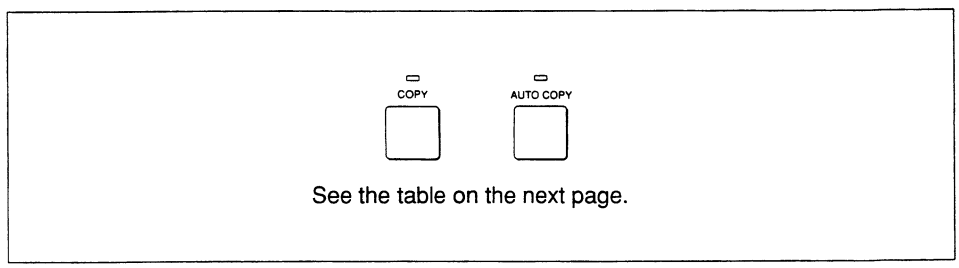


(To be continued)

3 Select the cassette side to be duplicated.
A: for one side of the cassette.
A + B: For both sides of the cassette.



4 Press the AUTO COPY button or COPY button.
AUTO COPY: To rewind each tape, start duplicating and rewind to the beginning again.
COPY: To start duplicating immediately without rewinding.



See the table on the next page.

To rewind the tape(s) independently
Insert only the cassette(s) to be rewound and then press the REWIND button. Each tape will be rewound to the beginning and will stop.

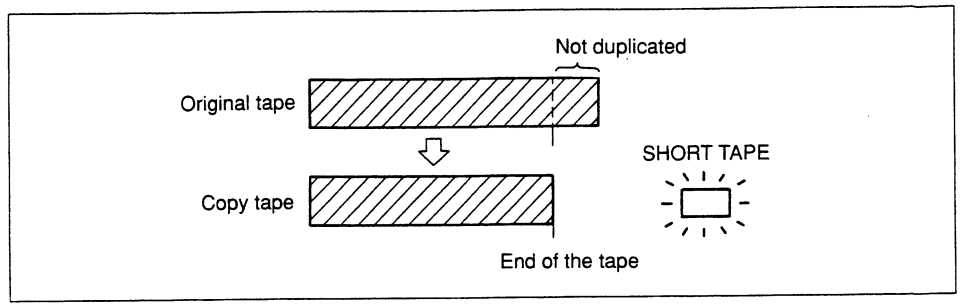
To stop the tapes
Press the STOP button.

To adjust the playback level controls
Normally set them to the center position, and adjust them by watching the level meters.

To use the additional CCP-2400 duplicator
Set the POWER switch of the CCP-2400 to ON and insert copy cassettes. By operating the master duplicator, duplication will begin on the additional duplicator simultaneously.

About SHORT TAPE Indicator

The SHORT TAPE indicator lights to show that a copy tape was so short that the duplication may not have been made completely and that a check is required. When a copy tape reaches the end before the end of the original tape, it stops but the original tape continues running. The corresponding SHORT TAPE indicator will light. The SHORT TAPE indicator will go off by pressing any button but STOP.

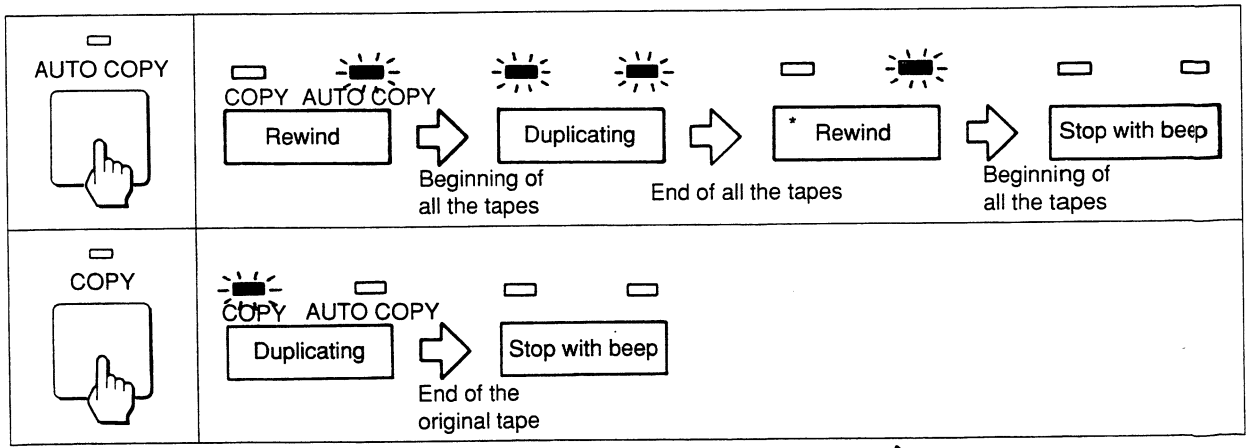


Note

When a copy tape reached the end just a moment after the end of the original tape, the SHORT TAPE indicator may light even if duplication is complete. To confirm duplication, use a cassette recorder to play back near the end of the copy tape. The indicator also lights when there is no tape in the cassette compartment.

Operation when the AUTO COPY or COPY button is pressed

The operation of the original and copy tapes is controlled as in the following table.



* If the SHORT TAPE indicator is lit, the corresponding tape is not rewound.

Maintenance

Cleaning the Heads and Tape Path

Keeping the tape heads in a clean condition is essential to the proper operation of the duplicator. Accumulations of dust and tape oxides on the heads and tape path will result in sound drop-outs, a loss of high frequencies and excessive tape wear.

To clean the heads

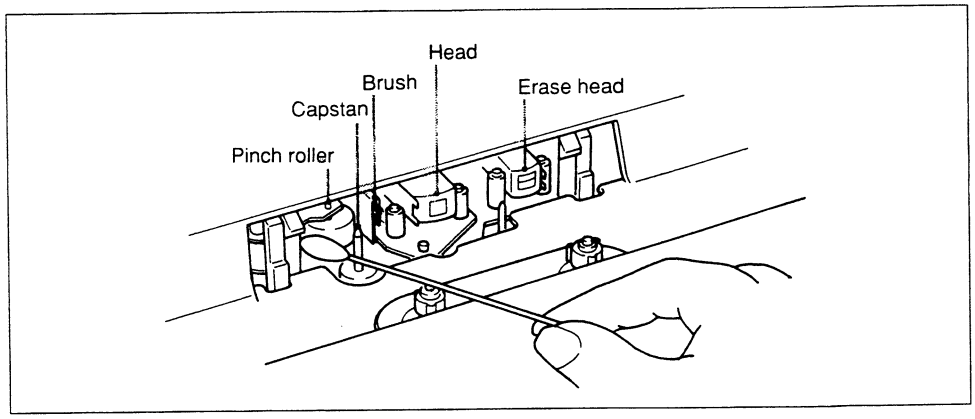
1 Remove the cassette, if present.

2 Set the POWER switch to ON while keeping the COPY button pressed for a few seconds. The head block assembly will come out for easier cleaning for 5 minutes.

3 Moisten the head cleaning tip (supplied) or a soft cloth with at least 98% denatured alcohol, and gently wipe the heads, capstan, pinch roller and tape guide in each cassette compartment.

4 Set the POWER switch of CCP-2400 to ON, if connected.
Clean the head block assembly as described in step 3.

5 Press any button but the COPY button to release the cleaning mode.



Notes

- Do not use any solvent which may damage the heads, capstan and/or pinch roller.
- Do not touch the brush for preventing the electrostatic noise.
- Do not insert a cassette before the alcohol has dried.

Demagnetizing Heads

Be sure the duplicator is turned off.
Residual magnetism will gradually build up on the heads through continuous use and cause an increase of tape noise in duplicating, erasure of high frequencies or hiss build-up on the prerecorded original tape. The heads and metallic parts of the tape path should be demagnetized **after every 20-30 hours of operation** with a commercially available head demagnetizer.

Cleaning the Cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with water or a mild detergent solution. Do not use solvents such as alcohol, benzine, or thinner as they may mar the finish of the cabinet.

Specifications

Power requirements	USA and Canadian models: 120 V AC, 60 Hz European model: 230 V AC, 50/60 Hz
Power consumption	USA and Canadian models: 0.74 A Euopean model: 67 W
Recording system	4-track 4-channel /4-track 2-channel
Tape cassette	Normal TYPE I cassette (C-30, C-46, C-60, C-90) (TYPE II and TYPE IV tapes not usable)
Tape speed	76 cm/s (30 ips)
Copy time	Approx. 2 min. (with C-60 cassette) (per run)
Rewind time	Approx. 45 sec. (with C-60 cassette)
Frequency response	40 – 12,500 Hz
Recording bias frequency	Approx. 600 kHz
Signal to noise ratio	50 dB, Peak level recording (NAB-A, WRMS)
Total harmonic distortion	Within 3 %
Wow and flutter	Less than 0.23 % (WRMS)
Crosstalk	Better than 52 dB (between tracks 2 and 3, at 1 kHz)
Drive control connnector	CCP-2300: Output (13-pin DIN) CCP-2400: Input (13-pin DIN), Output (13-pin DIN)
Dimensions	Approx. 328 × 160 × 382 mm (w/h/d) (13 × 6 3/8 × 15 1/8 inches) not including projecting parts and controls
Mass	Approx. 10.2 kg (22 lb 8 oz)
Accessories supplied	AC power cord (1) Head cleaning tip (1 set) Dust cover (1) Control cable with13-pin DIN connectors (1, supplied with the CCP-2400 only) Operating Instructions

Design and specifications are subject to change without notice.